Preppers Guide to Measles

General Description: Measles is a highly contagious viral infection caused by the measles virus. It spreads through respiratory droplets

Symptoms: Starts with high fever, cough, runny nose, and red/watery eyes (the "3 Cs"). Koplik spots (white mouth spots) appear, followed by a red rash starting on the face and spreading downward.

Complications:

- **Common:** ear infections, diarrhea, dehydration.
- **Serious:** pneumonia, encephalitis (brain swelling), blindness, and rarely death—especially in young children or malnourished individuals.

Vitamin A (How it helps):

- **Helps:** Reduces severity, complications (e.g., blindness, pneumonia), and mortality in measles by supporting immunity and repairing mucosal tissues depleted by the virus.
- **Two kinds:** Preformed retinol (animal sources) and provitamin A (beta-carotene from plants).
- **Preferred:** High-dose preformed vitamin A (retinol) supplements for treatment

Vitamin A Food Sources (Highest concentrations)

- Cooked lamb/beef liver (3 oz): ~6,000+ mcg RAE (top source).
- Cod liver oil (1 tsp): ~1,350 mcg RAE.
- Mashed sweet potato (1 cup): ~2,581 mcg RAE.
- Canned pumpkin (1 cup): ~1,906 mcg RAE.
- Cooked carrots (1 cup): ~1,329 mcg RAE.

Warnings on Vitamin A Over-consumption

- **Excessive preformed vitamin A (retinol)** can cause toxicity: nausea, headache, dizziness, dry skin, hair loss, liver damage, bone pain, and birth defects (avoid high amounts in pregnancy).
- **Liver limits: Adults** — do not exceed 1 serving (3 oz / 85g) of beef/lamb liver per week. **Children** — limit to 1 small serving (1–2 tablespoons) once a week or less. Plant beta-carotene is safer. Always consult a doctor before high-dose supplements or frequent liver intake.

Quercetin and Measles Research

- **Lab tests (in cells)** showed that quercetin — a natural plant compound found in capers (one of the richest sources), onions, apples, and berries — can slow down or stop measles virus growth after infection, especially when paired with vitamin C to keep it stable. It was one of the strongest performers among tested compounds.
- **Computer simulations** found that quercetin 3-sulfate (a naturally occurring sulfated form of quercetin found in some plants and produced in the body) binds very tightly to a key measles virus protein, suggesting it could block the virus effectively — better than some existing antivirals in the model.
    - **Source:** https://www.biorxiv.org/content/10.64898/2026.03.31.715719v1
    - **Source:** https://link.springer.com/article/10.1007/s44371-025-00343-4